

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Revision of the Commission's Rules to)	CC Docket No. 94-102
Ensure Compatibility With Enhanced 911)	
Emergency Calling Systems)	
)	
Amendment of Parts 2 and 25 to Implement)	IB Docket No. 99-67
the Global Mobile Personal Communications)	
by Satellite (GMPCS) Memorandum of)	
Understanding and Arrangements; Petition of)	
the National Telecommunications and)	
Information Administration to Amend Part 25)	
of the Commission's Rules to Establish)	
Emissions Limits for Mobile and Portable)	
Earth Stations Operating in the 1610-1660.5)	
MHz Band)	

COMMENTS OF ACUTA

ACUTA, Inc.: The Association for Communications Technology Professionals in Higher Education ("ACUTA") respectfully submits these comments in response to the Federal Communications Commission's ("FCC's" or "Commission's") *Further Notice of Proposed Rulemaking* in the above-captioned proceedings. ACUTA is a non-profit association whose members include over 820 colleges and universities throughout the United States, Canada, and other countries. There are 797 institutional members in the United States. ACUTA members include both large and small non-profit institutions of higher education, ranging from several hundred students to major research and teaching institutions with greater than 25,000 students.

ACUTA member representatives are responsible for managing telecommunications services on college and university campuses. In that capacity, ACUTA members provide telecommunications services to students in their residence halls and other campus-owned housing via multi-line telephone systems. In addition, we provide telecommunications services to faculty and staff via multi-line telephone systems and, increasingly, via various types of wireless communication systems and other emerging technologies such as Voice over Internet Protocol (VoIP).

ACUTA urges the Commission to (1) adopt a flexible approach that allows for continued use of campus police, security or safety departments to receive and respond to 911 calls on any college campus; (2) encourage Voice over IP telephone systems to develop E911 solutions that are widely available, affordable, and reliable; (3) work with the wireless industry to ensure E911 compliance. In addition, if the Commission should adopt new E911 obligations for multi-line systems, it should include a provision for grandfathering of older PBX equipment and a longer phase-in period for non-profit organizations and small organizations.

Colleges and Universities place a very high priority on the health and safety of college students, faculty, and staff on campuses.

It is important to note that there is a wide variety of telecommunications equipment and services in use on college and university campuses. Thus, higher education institutions have developed various methods of processing 911 calls, utilizing the capabilities of their equipment and the services that they are able to obtain from telecommunications service providers. These methods include fully compliant E911 systems for those campuses with PBX equipment or Centrex service that is capable of providing this service, and systems that route 911 calls to on-campus public safety offices that may or may not be officially designated as Public Safety Answering Points (PSAPs).

There is a wide range in age and type of telecommunications equipment and services in use on college and university campuses, and a significant percentage of that PBX equipment and Centrex service is not currently capable of E911 compliance.

In January, 2003, ACUTA conducted a survey of a random sample of member institutions regarding their current and planned capabilities to comply with E911. The goal of the survey was to obtain data regarding the E911 compliance capabilities of institutions that have PBX, Centrex, and Voice over IP systems. The results of this survey follow.

17% of the campuses that responded to the survey currently use Centrex service as a part of their service offering from their LEC. Of those, 36% of respondents reported that their LEC participates in some type of E911 system. Only 16% of respondents reported that the Automatic Location Identification (ALI) supplied by their LEC fully complies with E911 standards, wherein the building, floor and room are kept up to date in the Master Street Address Guide (MSAG) and supplied by routing equipment to the PSAP. For large campus buildings, the requirement to correctly identify floor and room is critical for E911 compliance.

For the 96% of campuses responding that have one or more installed PBX systems, 57% currently participate in an E911 system that includes the routing of all 911 calls to an officially recognized PSAP. Of the institutions that are not currently in compliance with E911, only 13% would have the capability to do so without purchasing additional software or hardware if the requirement were put in place. 54% responded that they would have to purchase new equipment or system upgrades.

Another issue that was identified in our survey as a significant challenge in implementing E911 is the fact that many campuses provide the same telephone number on telephones in multiple locations on a campus. These can include both wired and wireless telephones, due to the mobile nature of many campus personnel (Professors who travel between their offices, research laboratories, and branch campuses, and campus administrators who spend time in their offices but also roam throughout large campus facilities often prefer to maintain a single telephone number in order to be accessible.) For those responding to our survey, two-thirds of LEC-provided Centrex services, and nearly three-fourths of PBXs cannot provide the correct ALI for each of the telephones when multiple phones share one number.

Virtually all colleges and universities have internal police, security or public safety departments, which may or may not be certified as PSAPs.

Of those responding to the question, 37% of campus telephone systems supply E911 information to an internal campus police, security or safety office that is not certified as a PSAP. These campus police, security or safety departments are accessible 24 hours per day, and often are able to respond to 911 emergency calls more rapidly and precisely than the local police or fire departments. They are intimately familiar with all facilities and all corners of the campus and have access to all campus buildings. On many campuses, life safety is significantly enhanced by the ability of campus police and security officials to respond appropriately to an emergency situation by calling emergency services to direct them to the appropriate location and/or responding themselves. E911 requirements imposed on multi-line systems must not interfere with the ability of these institutions to continue to provide their own public safety. For these reasons, we urge the Commission to consider flexibility in any Federal standard to permit the option for campus police, security or safety departments to receive and respond to 911 calls on any college or university campus, if that is the arrangement preferred by the campus administrators.

Based on the experiences of colleges and universities with Voice over IP (VoIP) service, E911 compliance is not generally available at this time for VoIP.

Of the 71 survey respondents, only 15 institutions (21%) responded that VoIP is currently in use on their campuses. Only one reported that it is fully E911 compliant. Of the remaining respondents, one can identify the location within 300 feet of the hub or router, and one can route calls to their internal campus police department which acts as the PSAP for this purpose. One is currently collecting the building floor and room data, but not updating MSAG or routing VoIP calls to the PSAP. The remaining 10 (71% of respondents) are unable to provide E911 service on IP extensions.

This situation does not currently pose a major threat to health and safety, because at the present time VoIP systems are generally in trials or very small system installations. These systems are, with very few exceptions, currently used for staff and not in campus housing. In addition, back-up regular telephone service is often available to those involved in the VoIP trials. Still, we envision major challenges as VoIP becomes more

widely installed on campuses. In fact, the lack of E911 compliance, and resulting endangerment of health and safety, is a major obstacle to the adoption of this technology on campuses. We urge the Commission to use its influence with the telecommunications and information technology industries to devote more time and resources to developing reliable, cost-effective E911 solutions for VoIP telephony.

Another emerging issue is the use of laptop computers with “soft phone” software and other wireless devices for voice communications. As the Commission is no doubt aware, it is perfectly feasible for a campus employee to utilize their laptop or PDA device as a telephone, remote from the campus. Such calls may be routed through the campus PBX using the Internet and may be placed from home or while traveling thousands of miles away. To the PSAP, it appears that the call is being placed from the on-campus extension. Members of ACUTA have raised the question of how they can be in compliance with E911 in this scenario.

In the absence of good technical solutions to these issues, we suggest that owners of VoIP systems and telephones be initially exempt from any Federal E911 requirement. However, we also urge the Commission and the E911 community to work with manufacturers of this equipment and software to develop E911 solutions that are widely available, affordable and reliable. We are hopeful that the Commission can impress upon VoIP vendors, perhaps through the regulatory process, that E911 demands their technical attention. Any requirement for owners of multi-line VoIP systems to comply with E911 must be predicated upon the availability of technical solutions at a reasonable cost.

There has been a huge increase in the use of wireless telephones by college and university students. This poses major challenges for E911 compliance.

A 2002 study by the market research firm Student Monitor, LLC shows that nearly two-thirds (62%) of all college and university students in the U.S. own a cellular phone. Cellular phones are widely used throughout higher education campuses, including in campus housing in place of traditional telephone service. While most campuses still maintain conventional telephones in campus housing and emergency phones placed in strategic areas on campus to ensure access to 911 emergency calling, students often tend to use their cellular phones rather than conventional phones. For this reason, we are increasingly concerned about the failure of wireless carriers to comply with E911. At any given time, there are hundreds to thousands of students on each campus (in classrooms, at sporting events, on campus grounds, or in their vehicles) whose primary and most convenient access to 911 service is through their cellular phone. We are currently unable to ensure their access to E911 as wireless providers continue to work towards E911 compliance. We commend the Commission for its recent emphasis on wireless E911, and urge the Commissioners to remain vigilant in their efforts to provide this important public safety tool to cellular telephone users. When technical solutions become available at a reasonable cost, we can assure you that higher education institutions will make it a priority to work with carriers to support E911 compliance for cellular users on our campuses.

If the Commission should decide to create a Federal requirement for E911 for multi-line telephone systems, it should provide a long phase-in period and/or grandfather existing installed equipment.

We asked E911-compliant institutions in our survey how long it took them to implement E911 on their campuses, from the planning stages to completion. 17% of the respondents required over 24 months, 17% required 13-24 months, 30% required 7-12 months, and 35% were able to complete the implementation in six months. This data indicates that the majority can complete the task within 12 months, but we must keep in mind that budgeting generally takes at least one additional year. Therefore, we urge the Commission to provide a minimum two-year period for owners of multi-line telephone systems that are capable of upgrading to E911 to come into compliance.

However, there are many systems in use on college and university campuses that are not capable of a simple upgrade, and would require major upgrades or “forklift” replacement at a very high cost for institutions that are struggling financially along with all other state-funded and non-profit entities at this time.

Institutions cited the following as their reasons for not being in compliance with E911:

- Cost – 34%
- PBX hardware/software or telemanagement software not capable – 21%
- 911 calls are routed to on-campus police/security/safety personnel – 16%
- Not required by regulation – 11%
- LEC doesn’t offer service – 8%
- Other – 13%

As the survey demonstrates, the cost of upgrading or replacing a PBX is often the determinative factor for campus officials deciding whether or not to implement E911 solutions. The Commission should recognize that the costs to upgrade, replace, and maintain campus phone systems can be prohibitive, especially for smaller institutions, which often have the oldest phone systems.

For this reason, we strongly suggest that, if the Commission should adopt a Federal requirement for multi-line systems, it should allow for the grandfathering of older PBX equipment and a longer phase-in period for non-profit organizations and small organizations.

In summary, ACUTA urges the Commission to consider the following recommendations in designing any Federally mandated E911 requirements for multi-line telecommunications systems:

1. We urge the Commission to consider flexibility in any Federal standard to permit the option for campus police, security or safety departments to receive and respond to 911 calls on any college campus, where the campus maintains 24 hour, seven day per

week means of doing so and the arrangement provides an adequate means of signaling and responding to emergencies.

2. We urge the Commission to exert appropriate influence on vendors of Voice over IP telephone systems and other IP telephony devices to develop E911 solutions that are widely available, affordable, and reliable. Only after such solutions are available should the Commission consider requiring owners of multi-line VoIP telephone systems and other IP telephony devices to bring those systems into compliance with E911.

3. We urge the Commission to continue to work with the wireless industry to achieve E911 service for all cellular telephone users.

4. We strongly suggest that, if the Commission should adopt a Federal E911 requirement for multi-line systems, it should include a provision for grandfathering of older PBX equipment and a longer phase-in period for non-profit organizations and small organizations.

On Behalf of ACUTA: The Association
for Communications Technology
Professionals in Higher Education

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